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REMARKS

Reconsideration is requested in view of the above amendments and the following remarks. Revisions have been made in claims 1, 3, 4, 6-8, 10-15, and 17-20, and which are supported in Applicants' original disclosure. Claim 21 is added and supported for instance in Figure 4 and descriptions thereof in Applicants' disclosure. No new matter has been added. Claims 1, 3, 4, 6-8, 10-15 and 17-21 are pending in the application.

Applicants appreciate the Examiner's courtesy in interviewing this case with Applicants' representative Ms. Christine Yang on April 26, 2007, and during which the previous art rejection was discussed in addition to the source of water in the exhaust of Applicants' disclosure. No agreement on the claims was made, and the Amendment herein is submitted.

Claim Rejections – 35 USC § 102

Claims 1, 3, 4, 6, 11, 13, and 17 are rejected under 35 USC § 102(b) as being anticipated by Pribil (US 1,530,324). Applicants respectfully traverse this rejection to the extent it is maintained.

Claim 1 is directed to an exhaust assembly for a marine genset that requires a sound-dampening device configured to be coupled between an exhaust manifold and a muffler. Claim 1 further requires that the sound-dampening device includes a tubular member having two or more rings and each ring having an inner surface exposing directly to an exhaust gas passageway. Claim 1 also requires the rings being configured to provide constriction of the passageway which causes mixing of cooling water with exhaust gases to reduce noise generated by a combustion engine.

Pribil fails to disclose or even suggest a sound-dampening device coupled between the exhaust manifold and the muffler, as required by claim 1. Rather, Pribil discloses a muffling tube 3 attached to an exhaust pipe 2 connected to an internal combustion engine 1. See Figure 1 and Col. 1, lines 51-56. In fact, Pribil's muffling tube is connected after the exhaust pipe and internal combustion engine, and is exposed directly to the outside for the exhaust gas to pass to the atmosphere. See Figures 1 and 2 and Col. 2, lines 1-2 and lines 110-112. Accordingly, Pribil does not disclose or suggest

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a sound-dampening device coupled between the exhaust of the combustion engine and the muffler, for at least these reasons.

Furthermore, Pribil does not disclose or suggest a sound-dampening device having a tubular member with two or more rings, where the rings are configured to provide constriction of the passageway to cause mixing of cooling water with exhaust gases so as to reduce noise generated by the combustion engine, as claimed in claim 1.

In a marine exhaust system, the invention of claim 1 provides the tubular member, coupled between the combustion engine of a generator set (genset) and a muffler, that transfers exhaust gases and raw water flowing from the genset to the muffler and water separator, which are remotely located from the genset. (See for example page 1, lines 9-13 of the specification). Advantageously, the claimed exhaust assembly, in particular the rings located on the inner diameter of the tubular member, helps form water droplets from the raw water that flows into the tubular member. The rings constrict the water and interfere with the flow of the water. The water then builds up and spills over the rings, creating turbulence in the flowing water resulting in a substantial amount of water droplets. These water droplets from the flowing water are mixed with gas, and the noise generated by the combustion engine is reduced. The constriction provided by the rings also increases the velocity of the exhaust gas to more effectively pick up drops of water from the bottom of the turbulent member and mix the water with the gas. These factors, among others, provide for the sound dampening properties of the tubular member. (See for example page 4, lines 12-23 and page 5, line 27 to page 6, line 9 of the present specification).

Pribil, as noted, does not disclose or suggest a sound-dampening device configured to be coupled between the exhaust manifold and the muffler. The reference further does not disclose or even suggest having a tubular member with rings that are configured to provide constriction of the passageway which causes mixing of cooling water with exhaust gases to reduce noise generated by the combustion engine. On the contrary, Pribil merely discloses the flexible muffling tube 3 connected after both the internal combustion engine 1 and the exhaust pipe 2, and for breaking up gases in

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automotive vehicles. In fact, Pribil's muffling tube acts as the muffler and is exposed directly to the outside for the exhaust gas to pass to the atmosphere.

Moreover, Pribil discloses nothing of raw cooling water flowing from a genset through its muffling tube and to a muffler. The reference merely discusses the muffling tube 3 having a thin metal strip stamped to form a toothed or serrated edge 8 to obstruct the passage and to break up gases passing through. See Col. 2, lines 71-96 and Figures 2 and 3. The rejection appears to contend that Pribil's exhaust design would inherently emit cooling water and exhaust gases, given that water would result from the nature of hydrocarbon burning in internal combustion engines. While Applicants do not dispute the Examiner's assertion on the nature of hydrocarbon burning reactions in an internal combustion engine for purposes of this response, Applicants disagree that Pribil's exhaust design is configured to mix cooling water with exhaust gases as required by the claimed invention. For the Examiner's reference, Applicants respectfully submit that the cooling water, which is mixed with the exhaust gases in the tubular member as claimed, refers to a flow of raw water in a marine genset and flowing from the genset to the muffler. (See page 1, lines 9-13.) Further, the water droplets that are formed are a result of the flow of raw water through the tubular member, where the rings constrict the water and interfere with its flow. The water then builds up and spills over the rings, creating turbulence in the flowing water resulting in a substantial amount of water droplets. These water droplets from the flowing water are mixed with gas, and the noise generated by the combustion engine is reduced.

However, Pribil does not disclose or even suggest a tubular member configured to cause mixing of cooling water with exhaust gases to reduce noise generated by the combustion engine, and the reference suggests nothing of the advantages that can be enjoyed thereby. Pribil simply discloses its muffling tube for breaking up exhaust gases in automotive vehicles and is not the same, either structurally or functionally as, the tubular member for a marine genset as required by claim 1. See Col. 1, lines 20-25. In fact, Pribil is not relevant to a marine genset, and there is no reasonable basis to assume that Pribil's exhaust design can be used in a marine genset. For at least the foregoing, claim 1 and its dependents are allowable over Pribil.

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Regarding claims 3 and 4, these claims are allowable over Pribil for at least the reasons discussed with respect to claim 1. Furthermore, claim 3 requires that the tubular member of the sound-dampening device is flexible and configured to be connected between the exhaust manifold and directly to the muffler. Claim 4 requires that the tubular member is rigid and is connectable between the exhaust manifold and an exhaust hose connected to the muffler. Pribil further does not disclose or suggest such additional limitations of claims 3 and 4.

With regard to claim 6, an exhaust apparatus for a marine genset is claimed that includes a flexible exhaust tubular member configured to be connected between an exhaust manifold and a muffler. Similar to claim 1, the flexible exhaust tubular member of claim 6 also requires two or more rings, where the rings being configured to provide constriction of the passageway which causes mixing of cooling water with exhaust gases to reduce noise generated by a combustion engine. For at least the same reasons discussed above with respect to claim 1, claim 6 and its dependents are allowable over Pribil.

Claim 11 is directed to an exhaust apparatus for a marine genset including a rigid tubular member having at least two rings and each ring having an inner surface exposing directly to an exhaust gas passageway. As with claim 1, claim 11 further requires that the rings being configured to provide constriction of the passageway which causes mixing of cooling water with exhaust gases to reduce noise generated by the combustion engine. For at least the same reasons discussed above with respect to claim 1, claim 11 and its dependents are allowable over Pribil. Further, the rejection appears to contend that end 10 of the exhaust pipe 2 in Pribil satisfies the structure required by claim 11. The rejection seems to impart the structure of the muffling tube 3 into the structure of the end 10. However, Applicants respectfully submit that this interpretation of the reference is incorrect. The end 10 is merely an end of the exhaust pipe 2, and there is no showing or disclosure that such end 10 would include the same structure of the muffling tube 3. For at least this reason as well, Pribil does not disclose or suggest claim 11 or its dependents.

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Claim 17 is directed to an exhaust system for a marine genset including an exhaust tubular member between an exhaust and an exhaust hose, where the exhaust tubular member has two or more rings and each ring having an inner surface exposing directly to an exhaust gas passageway. Claim 17 also requires that the rings being configured to provide constriction of the passageway which causes mixing of cooling water with exhaust gases to reduce noise generated by the combustion engine. For at least the same reasons discussed above with respect to claim 1, claim 17 is allowable over Pribil.

For at least the foregoing, claims 1, 6, 11, and 17 and their respective dependents are distinguishable from and allowable over Pribil. Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Claim Rejections – 35 USC § 103

Claims 7, 8, 10, 12, 14, 15, and 18-20 have been rejected under 35 USC 103(a) as being unpatentable over Pribil (above) as stated in paragraphs 13-15 of the Office Action. Applicants respectfully traverse these rejections.

Claims 7, 8, 10, 12, 14, 15, and 18-20 respectively depend upon claims 1, 6, 11, and 17 and are patentable over Pribil for at least the same reasons discussed above. Applicants are not conceding the relevance of the rejections to the remaining features required by claims 7, 8, 10, 12, 14, 15, and 18-20.

Furthermore, at least claims 7, 8, 10, 14, and 18-20 are separately allowable over Pribil. These claims are directed to additional features of the ring configuration including ring spacing and hose/tube diameter and length. The rejection appears to contend that such features are a matter of design choice. Applicants respectfully disagree, and contend that such features of the ring configuration and hose/tube dimensions can further facilitate the mixing of cooling water and exhaust gas and contribute to the overall noise reduction. For example, Applicants have demonstrated that spacing of the rings and sizing of the exhaust tube/hose can advantageously reduce noise generated by a combustion engine in a marine genset. (See Applicants' Figures 9 and 10 and description thereof.) However, Pribil does not teach or suggest the additional features required by

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these claims, and there is no reasonable basis to assume that one of skill in the art could modify Pribil to arrive at these claims. As noted, Pribil is simply directed to a muffling tube for breaking up exhaust gases in automotive vehicles and is not the same, either structurally or functionally as, the tubular member for a marine genset as required by claim 1. For at least the foregoing, Applicants respectfully submit that claims 7, 8, 10, 12, 14, 15, and 18-20 are allowable.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

In view of the above, favorable reconsideration in the form of a notice of allowance is respectfully requested. Any questions regarding this communication can be directed to Applicants' representative listed below.



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MDS:BAW:tk

Respectfully submitted,

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